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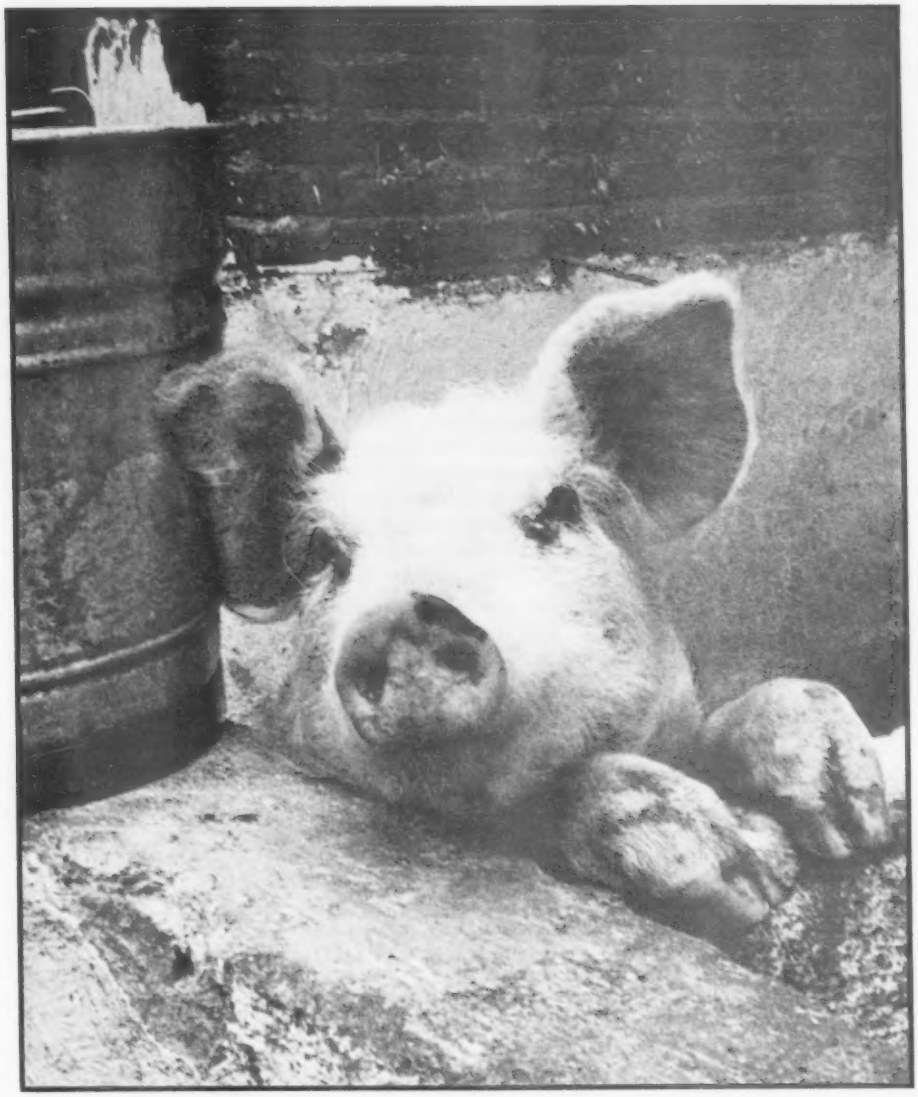

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Success of Ambitious Soviet Dairy Plans May Depend on Imported Inputs

By Steven D. Yoder

The Soviet Union's 1976-80 Five-Year Plan outlines an ambitious development program for the country's dairy sector. The project calls for increases in an already high level of production and better distribution of milk in deficit areas. However, the USSR will probably have to import sizable amounts of technology, feed, and other inputs before these goals can be achieved.

The Soviet Union—a sporadic importer of large volumes of European and Oceanic dairy products—may not be importing so frequently in coming years if the ambitious dairy goals of its 1976-80 Five-Year Plan are realized.

But before it is able to expand its dairy industry in a really big way, the Soviet Union must first solve a multitude of problems dealing with production, storage, transport, and processing. And some of the USSR's problems will be solved only after it makes major imports of dairy technology, feed ingredients, breeding stock, and equipment.

And the United States—already a significant exporter of grains and soybeans to the Soviet Union, and source of top-quality dairy stock bred under similar climatic conditions—will undoubtedly benefit from such developments. U.S. agricultural technology and machinery—genetically based programs to improve herd quality; production facility designs; and production, storage, transport, refrigeration, and packaging equipment, for example—could be adjusted to fit the particular needs of the Soviet dairy industry, opening new avenues of trade.

Currently, the Soviet Union is a minor purchaser of U.S. dairy breeding cattle—100 head in calendar 1977—although Soviet data show 1976 worldwide imports of 5,518 head of breeding cattle. The Soviet Union imports dairy stock from Canada, the United Kingdom, and the Netherlands, as well as from the United States.

Mr. Yoder, now Assistant U.S. Agricultural Attaché, Moscow, prepared this article while an economist in the Dairy, Livestock, and Poultry Division, FAS.

(A Soviet trade team was in the United States recently to examine U.S. breeding cattle. It is likely additional cattle sales will be made to the USSR later in 1978.)

In 1976/77, the USSR imported 825,000 metric tons of U.S. soybeans and 4.5 million tons of feedgrains. A year earlier, the totals were: Soybeans, 310,000 tons and feedgrains, 9.8 million tons. Nearly all the soybean and grain imports now go to the poultry and swine sectors, with only residual amounts being fed by the dairy sector.

However, with further Soviet development of interfarm complexes—a production system under which farms, farm units, or production elements are regrouped in an attempt to streamline Soviet production—and an increase in the number of genetically superior dairy cattle in the USSR, the long-term outlook is that demand for soybeans and other high-protein feed ingredients will grow. Because dairy enterprises comprise a significant proportion of these complexes, the dairy industry may get a larger share of these feedstuffs.

And, with the increased milk production resulting from liberal feeding of some specialized dairy cows and from an attempt to upgrade the diet of the traditional dairy herd, more milk-based products may become available for export.

In both 1974 and 1975, the value of Soviet dairy product exports exceeded the value of such imports. In 1974, exports totaled 40 million rubles, compared with imports of 25 million. In 1975, exports were 44 million rubles; imports, 31 million.

(Currently, at the official Soviet rate, 1 ruble equals roughly US$1.43. However, the ruble is discounted

considerably in Western Europe.)

Traditionally, Soviet exports of dairy products have been relatively small but steady. Butter exports have hovered near 20,000 tons annually since 1971. In 1976, only 1.6 percent of the country's butter production was exported. Canned condensed milk exports have held steady at about 30,000 tons and accounted for about 5 percent of its output. Cheese exports have remained steady at 7,500-8,000 tons, about 1 percent of production.

Most of these exports went to other Communist countries: Cheese to Cuba and the German Democratic Republic (GDR); condensed milk mostly to Cuba and Mongolia; and—although detailed-by-country statistics have not been available since the early 1970's—Soviet butter was probably exported to Czechoslovakia, Poland, and the GDR.

Soviet imports of dairy products for 1977 are estimated at 60,000 tons of butter, 30,000 tons of dry milk, and 9,000 tons of cheese (including 2,000 tons of brynza, a "specialty" cheese from sheep and goat's milk). New Zealand supplied 7,000 tons of the Soviet Union's imported butter in 1977 and Australia provided 3,000 tons.

Finland has been a regular supplier of dairy products, especially of butter and dry milk, but there are no significant imports of dairy products from East European countries.

The European Community has been a sporadic supplier of butter and nonfat dry milk—particularly when low-priced bargains could be struck to encourage large sales from EC surpluses.

In 1973, for example, the Soviet Union bought 200,000 tons of EC butter at about 18-19 cents per pound, a price so low it required an EC subsidy of some 80 cents per pound, for a total subsidy of about $350 million. This sale reduced the 1973 EC stocks of surplus butter by about one-half.

The private and socialized sectors of the Soviet Union's agricultural economy both produce milk. Privately produced milk, usually from a single cow on a family plot of 1 hectare or less, generally supplies only the cow-owning family and possibly neighbors. Some private sector milk is siphoned off by State purchases. Milk from the socialized sector is bought by the State and is the source of commercially processed milk products.

Historically, private-sector cows have played a substantial role in providing milk. In 1941, 75 percent of the Soviet cows for milk production were in the private sector, but they dropped to only 32 percent by 1977. Privately held cows fell in absolute numbers from 15.5 million head in 1971 to 13.4 million head in 1977.

The rise in the number of cows on State and collective farms in the interim has more than offset this reduction. The milk-cow total (private plus public sectors) was 42 million head in 1977, up from 28 million in 1941.

Production of milk by the socialized sector has trended upward over the past 10 years to reach 62.2 million tons in 1976. Private sector output peaked at 31.3 million tons in 1968, but had fallen steadily to 26.9 million tons by 1976. In the latter year, 63 percent of the country's milk was purchased by the State —rising steadily from 57 percent in 1971.

Government purchases of milk are expected to reach 67 million tons by 1980. If achieved, this level would mean a rise of 19 percent in procurements in the preceding 5-year period. But since procurement growth rates were only 5 percent in 1974, 1 percent in 1975, and zero in 1976, the 1980 procurement target may be difficult to achieve. It will depend upon milk production increases in farm complexes and on socialized-sector farms.

Almost one-half of State-procured milk goes into butter production. Fresh milk products such as fluid milk, cream, cottage cheese, ice cream, and fortified milk account for 40 percent. Butter production was 1.3 million tons in 1976. Fresh milk and related product outturn was 22.7 million tons.

Cheese accounted for 9 percent of procured milk in 1976 and production was 609,000 tons; dry skim milk production was 242,000 tons. Production of dry whole milk and dry cream was 212,000 tons, accounting for about 3 percent of procured milk. (These percentage estimates are on a fat-solids basis).

Current output of dry milk in the Soviet Union appears to be about one-tenth of what could be produced if the industry were to process all the nonfat solids associated with the fat churned into butter. The 1976-80 plan envisages a doubling of both dry skim milk and dry whole milk production. A large share of this increase will be diverted to northern and eastern parts of the Soviet Union where milk supplies are shorter than in most of the rest of the country. Cheese and fluid milk production will also be pushed under the 1976-80 plan. However, growth in butter production is planned at a slower rate.

Total fluid milk output in

"U.S. agricultural technology and machinery . . . could be adjusted to fit the particular needs of the Soviet dairy industry, opening new avenues of trade."

1976 was 10.4 million metric tons, about 60 percent unprocessed, that is, not reported as heated, vitaminized, sterilized, or pasteurized, compared with 9.9 million tons in 1975, 85 percent of which was unprocessed. The production trend seems to indicate greater emphasis on lower fat products and a rise in the amount of milk being processed.

The Soviet Union is mechanizing segments of the dairy industry serving urban consumers. The industry gradually is speeding operations by installing bottle sterilizers and filling machinery, paper carton equipment, continuous churns, separators with automatic residue emptiers, and transfer lines. It is introducing plastic milk containers in some regions—a pronounced shift from a system that requires retail consumers to take milk home from distribution centers in their own containers.

"Some of the USSR's problems will be solved only after it makes major imports of dairy technology, feed ingredients, breeding stock, and equipment."

Except in the major cities —where milk is packaged— commercial fluid milk distribution is very simple. In the Ukraine, for example, fresh milk is immediately shifted from the milking area to a processing section in the same building. In the processing section, the butterfat content is standardized at 3.5 percent, the milk is pasteurized, cooled, and immediately pumped directly into delivery trucks or wagons of 1-ton capacity. These take the milk to retail distribution points, where it is poured into the containers of the consumers.

Shortages of refrigeration, particularly in homes, slow the changeover from bulk distribution to glass, paper, or plastic containers. At the consumer level in 1975, there were 62 refrigerators per 100 families.

The industry actively is developing new milk foods. Most have been especially tailored to meet consumer tastes and, as a consequence, are in great demand. Their milk-fat value has been set low in keeping with industry trends of reducing milk-fat content of new products to stretch the available amount of fat.

The Soviet Union obtains technical information on all aspects of dairying from many quarters. Specialists study and apply to Soviet conditions the results of production and processing research reported from the United States, Western Europe, and Oceania. Technical journals from these countries are used in planning sessions in Soviet dairy institutes. Advertisements in trade magazines familiarize Soviet planners with Western commodities and equipment.

The Soviet Union already has purchased high-technology feed processing machinery to supply the livestock industry with high-protein feeds. Entire feed mills and supporting equipment have been bought from the United States and other countries. In fact, several complete turnkey dairy enterprises have been procured from the West in recent years.

Genetic improvement of the country's herds may be the most difficult goal of Soviet planners, unless larger numbers of cattle and/or semen are imported from the United States or other Western countries. However, breed improvement programs have been started with U.S. and European Holsteins and local breeds.

But a non-Soviet geneticist, who has appraised the Government's cautious approach to herd improvement, believes it may require as long as 15 bovine generations (in the United States, 2 years each) to boost per-cow milk outturn from the current average of 2,402 kilograms for State and collective farms and 1,776 kilograms for private production to the planned average of 5,000-7,000 kilograms of milk per cow, assuming of course, that other production factors also are optimized.

USSR consumption of dairy products has risen steadily in recent years, going from 260 kilograms (milk equivalent) per person in 1966 to 315 kilograms 10 years later. This rising trend contrasts with that in the United States where per capita use has fallen from 274 kilograms (milk fat equivalent) in 1966 to 250 kilograms currently.

Despite the Soviet production level, which is already adequate to support the current high level of per capita milk consumption, the target of the 1976-80 plan is to boost output further to support a 5-percent rise in consumption to 330 kilograms per capita by 1980.

Soviet consumers are tempted toward greater use of dairy products by the large array of items available. Whole milk products include sour cream, sour milk, yogurt, sweet curds, fat curds, and other items. Butter is produced in at least seven different forms and there are reportedly 70 kinds of cheeses.

Milk production in the northwestern Republics (on a per capita basis) is greater than in the southern or southeastern Republics. In Latvia, for example, more than 715 kilograms of milk are produced per capita, while Republics in the south and southeast produce 150 kilograms per person. As a consequence of this high local production level, Latvian milk consumption also is high. □

Greece-EC Membership Talks Expand To Agriculture

By John E. Montel

Greece's membership negotiations with the European Community (EC) entered a crucial period the week of July 24 as discussions on the agricultural sector began.

On July 26, the EC Commission finalized its proposals to the EC Council concerning the duration of the Greece's transition period after Greece becomes a member. In its proposals, the Commission approved a transition period of 5 years. In cases where it is necessary to make large tariff adjustments for certain agricultural areas, the transition period could be extended to 7 years.

However, under no circumstances did the Commission feel the transition period should exceed 8 years.

Negotiations on agriculture were formally initiated on July 27, with the sector-by-sector examination of agricultural problems to begin in September.

Talks on the agricultural issue are expected to be lengthy and difficult. The present south European EC members—namely France and Italy—see Greek entry as a threat to their own farmers and will be keeping a sharp eye on the negotiations.

The United States also has a stake in the talks; to a great degree, as the Greek negotiations go, so go the negotiations with Spain and Portugal—all of which are important markets for U.S. farm products. Greek negotiations with the EC are an important bellwether for future U.S. agricultural exports to Greece and—further up the road—Spain and Portugal.

Thus far, Greece's negotiations with the Community have been proceeding smoothly and are relatively on schedule. Negotiations for most of the important provisions of the Greek Treaty of Accession will probably be completed by the end of this year and signed sometime during the latter part of 1979.

Actual Greek entry into the EC will probably take place sometime toward the end of 1980 after the Treaty of Accession has been ratified by the Greek Parliament and the parliaments of the nine EC Member States. A likely date of entry would be January 1981.

Although agriculture has always played an important role in European politics for social reasons, the heavy dependence of the Greek economy on agriculture makes social considerations in this case even more important.

This implies that the Greek economy will have to develop almost faster than the agricultural sector if it is to absorb labor from the agricultural sector as farm production becomes more efficient with the help of the EC's structural improvement projects.

Negotiations between the EC and Greece will focus on five broad aspects of the Community's provisions affecting trade and agriculture:

- How Greece can adopt all the provisions of the Common Agricultural Policy (CAP);
- How Greece can adopt the EC's common prices and aids or subsidies;
- A schedule and terms for completion for a customs union between Greece and the EC;
- Elimination of existing quantitative restrictions affecting trade with third countries; and
- Greece's application of the EC's preferential tariff arrangements with third countries.

The EC Commission has made known its position on several of these issues. In principle, it favors full application of all EC market mechanisms affecting agriculture starting on the date of accession. But the Commission is prepared to delay or phase in application of some of these mechanisms where there were justifiable technical or structural reasons.

Regarding prices, Greece would be expected to aline itself immediately with the EC's current price and aid levels where this would not significantly alter prices paid to Greek farmers or those paid by consumers for the products in question.

In cases where the price and aid adjustments would be too abrupt or cause problems for the Greek economy, the Commission would probably favor phasing them in over some time period.

Greece would like to aline its tariff schedule with the EC's common external tariff gradually and there seems to be a consensus in the EC in favor of this. On the other hand, the nine Member States are likely to require that all nontariff barriers affecting intra-EC trade be eliminated as of the date of Greek accession.

Greece will probably also be allowed to aline progressively its customs tariff with the EC's preferential tariff arrangements with third countries for agricultural products.

On the other hand, Greece would probably have to apply the EC's preferential nontariff measures with third countries in full as of its date of entry. Included in this move would be reduced levies on olive oil from Tunisia and certain grain from Egypt.

Given the importance of raisins and dried figs in the Greek economy, Greece is likely to ask for border controls and some sort of price or income guarantees for these products. During the past 5 years, Greece produced an average of about 79,000 metric tons of raisins and 20,000 tons of dried figs annually.

Since both of these products are of only minor importance in terms of production to the EC, the Community may decide to modify the existing CAP for fruits and vegetables in response to Greek concerns in these product areas rather than attempt to construct new CAP's.

By modifying the present fruit and vegetable CAP to include these products, Greece's raisins and dried figs could then benefit from the Community's existing trade protective and market

Mr. Montel is U.S. Agricultural Attaché, U.S. Mission to the European Community, Brussels.

support measures.

However, for other products—such as sheep, sheepmeat, and raw cotton—serious consideration will probably be given to Greek requests for new CAP's. The Commission's proposal to the EC Council for a sheep and sheepmeat CAP, which is still under consideration by the Council, would seem to respond to Greek requirements.

This is not the case for cotton, however, which is not produced currently in significant commercial quantities in the EC. Given the major importance of cotton in the Greek economy, it is likely that sympathetic and serious consideration will be given to the Greek request for a cotton CAP.

The Commission estimates that there are currently around 70,000 cotton growers and that cotton contributes about 5 percent to the gross value of Greek farm production. It is doubtful that the EC will agree to draw up a CAP for pine resin, which is commercially important only for Greece.

There are other problems ahead for Greece—the Greek economy will have to undergo some severe strains and stresses as consumer prices for food increase and as Greece assumes some of the burden of storing farm surpluses.

The current EC-Greece Treaty of Association, which gives Greece some trade advantages without some of the Community obligations, will have to be modified—making Greece unhappy in the process. But some of the burden of assuming new obligations may be offset by EC financial aid. □

Nigeria Reduces Import Restrictions on Poultry, Beef

Nigeria has lifted its ban on poultry and beef imports imposed on April 1, 1978, (*Foreign Agriculture*, May 1, 1978), but imports remain subject to licensing.

Lifting of the ban was preceded by a decision on May 19 to reduce the duty on rice from 40 to 20 percent. The import licensing requirement for rice, also introduced in April, has been retained. Prior to April 1, the duty was 10 percent.

In 1977, U.S. exports of rice and poultry to Nigeria totaled $83 million and $6.5 million, respectively.

Other import restrictions introduced last April remain in force.

Since achieving independence in 1960, Nigeria has maintained various import controls. Traditionally, these controls, justified largely on the grounds of balance-of-payments problems, have been in the form of bans, import licensing, and periodic duty increases. The import restrictions announced in April resulted in food shortages and greater inflation and necessitated a partial return to liberalized trade.

For 1978, the Nigerian National Supply Company (NNSC)—the official procurement agency—has been authorized to import substantial quantities of rice, beef, beans, and stock fish in order to build inventories.

NNSC estimates its 1978 imports at 350,000 metric tons of rice, 360,000 tons of beef, 600,000 tons, each, of beans and wheat flour, 6.8 million cartons of evaporated milk, 207,500 tons of table salt, and 250,000 tons of sugar. □

World Food Price Increases Ou

Glancing at retail food advertisements in a newspaper, a U.S. consumer knows that prices in recent years have risen rapidly to high levels. Yet a look at the food price indexes (FPI's) of 15 other countries regularly surveyed by FAS reveals that since 1970, U.S. food prices have risen far less than have those in some other countries.

Only three countries of those regularly surveyed reported lower FPI rates of rise than did the United States. The May 1978 U.S. food price index (1970 = 100) stood at 182.2. Only consumers in West Germany (with an FPI of 146.8), the Netherlands (161.7), and Belgium (172.5) fared better than those in the United States.

For some countries, such as Argentina (with an index of 43,311.1), Brazil (772.4), and the United Kingdom (314.1), the FPI rate of rise was much higher. Mexico and Italy, with May indexes of 304.4 and 268.7, respectively, were far above that of the United States.

By Sidonia R. DiCostanzo, FAS.

Food Price Index Changes in S

Country	Latest month	Index [1] 1970=100
Argentina	May	43,311.1
Australia	May	211.8
Belgium	May	172.5
Brazil	May	772.4
Canada	May	209.4
Denmark	May	219.0
France	May	212.8
Germany	May	146.8
Italy	May	268.7
Japan	May	217.4
Mexico	May	304.4
Netherlands	May	161.7
South Africa	May	222.9
Sweden	May	211.7
United Kingdom	May	314.1
United States	May	182.2

[1] Based on official price indexes.

FAS Survey of Retail Food Pr

[U.S. dollars per kg [1] or u

City	Steak, sirloin, boneless	Roast, chuck, boneless	Pork chops	Roast, pork, boneless	Ham, canned	Bacon, sliced, pkgd.	Broilers, whole [1]	Eg do
Bonn	12.55	7.58	5.33	10.65	([2])	8.37	2.02	1.
Brasília	2.20	1.92	2.61	4.99	5.63	6.12	1.19	
Brussels	11.41	5.97	5.13	5.10	7.54	4.82	2.66	1.
Buenos Aires	1.34	.77	1.92	([2])	([2])	4.48	1.34	
Canberra	5.98	3.28	4.25	4.09	6.28	5.76	2.29	1
Copenhagen	14.96	6.39	7.82	8.17	6.41	7.08	2.55	1.
London	9.63	4.77	4.20	3.54	3.46	4.53	1.69	1
Mexico City	2.67	2.58	2.59	3.50	([2])	3.24	1.75	
Ottawa	6.25	3.64	4.62	3.62	5.29	3.58	2.14	
Paris	8.39	4.76	5.94	5.81	8.68	9.90	2.94	1
Pretoria	4.04	2.13	2.83	3.12	4.32	3.40	1.36	
Rome	9.46	8.28	4.73	4.73	4.66	4.71	2.91	1
Stockholm	12.92	7.90	6.24	11.02	7.60	6.14	3.61	1
The Hague	10.84	6.32	5.87	7.00	5.77	8.46	2.15	
Tokyo	31.90	21.83	11.91	11.96	14.67	8.17	3.60	1
Washington	5.20	3.35	4.54	4.23	6.90	4.17	1.41	
Median	8.93	4.77	4.68	4.99	6.28	5.29	2.15	1

[1] 1 kilogram=2.2046 pounds; 1 liter=1.0567 quarts. [2] Not available. Source: U.S. Agricultural Atta

Outpace U.S. Gain

U.S. Agricultural Attachés report monthly FPI's for selected countries on a bimonthly basis. At the same time, the Attachés report prevailing prices for selected food items in the capitals of the countries to which they are assigned.

Meat. Attachés report that food prices shopped on July 5 show that in some countries, strong beef and chicken prices are tempering the pork price decline. Between May 3 and July 5, sirloin steak prices advanced in 13 of the 16 world capitals covered in the survey.

Tokyo prices for this item, however, were lower on the date of the survey because of special discount rates effective on July 5.

Urban Brazilian consumers are entering the time of year when cattle are at their lightest weight, slaughter levels are low, and only frozen meat from Government stocks is available. Consequently, shoppers are purchasing additional quantities of fresh meat in anticipation of short supplies.

In Canberra, beef prices rose about 30-40 percent as a result of the U.S. decision to increase beef imports in 1978.

During the past 2 months, Canadian meat prices have also shot up significantly; sirloin by 14 percent and chuck by 19 percent. These sharp increases are attributable to the continued reduction in slaughter levels and higher market prices for all classes of slaughter cattle.

Although pork, ham, and bacon prices have advanced in some of the world capitals, Brasília reports lower pork prices caused by reduced consumer demand following an outbreak of African swine fever.

The 9.5-percent increase in hog slaughter in Canada during the first 6 months of 1978 (compared with the same period a year earlier) has failed to make a notable change in hog meats at the retail level.

In line with the continued downtrend in domestic hog prices as reported by the Attaché in Brussels, retail fresh pork prices declined 2.5-4 percent; bacon prices, however, were up 4.7 percent.

In Copenhagen, consumers have reacted sharply to inflationary prices and an increase in the value-added tax. Retail stores report a drop in meat sales of 10-12 percent during recent months.

Poultry prices were pushed upward in 11 of the capital cities as consumers backed away from higher red meat prices. Only Brussels reported lower average broiler and egg retail prices, down by 2.3 and 7 percent, respectively, as a result of overproduction and lower seasonal demand.

Dairy products. In line with a recent EC price increase, dairy products advanced in most of the capitals in that area. In The Hague, prices of Gouda cheese weakened owing to oversupply, higher production, and lower export demand.

Produce. In The Hague, tomato prices dropped substantially following large imports of field tomatoes from overseas.

Sharply higher onion and potato prices were noted in most of the capitals. In Bonn, Brussels, and Paris, the price of onions doubled since the May shopping. Ottawa reported potato prices to be up three times from the May level, reflecting a pronounced seasonal price increase prior to harvest of the 1978 crop. □

s in Selected Countries [1]

	Percent change from		
	Prev. month	Three months	One year
1	+9.6	+35.0	+180.6
8	+ .8	+ 2.4	+ 9.8
5	−1.1	− 2.2	+ 1.4
4	+3.4	+ 7.5	+ 33.8
4	+3.4	+ 6.6	+ 16.9
0	+ .3	+ 1.5	+ 10.2
8	+ .5	+ 2.5	+ 9.7
8	+ .1	+ 1.1	+ 1.2
7	+1.1	+ 3.8	+ 13.8
4	+ .2	+ 2.5	+ 3.1
4	+1.3	+ 4.4	+ 15.7
7	− .1	0	− 1.0
9	0	+ .9	+ 11.2
7	0	0	+ 12.2
1	+ .8	+ 3.0	+ 9.2
2	+1.8	+ 4.0	+ 9.2

d Prices in Selected World Capitals, July 5, 1978

[1] or units as indicated, converted at current exchange rates]

s,	Eggs, dozen	Butter	Margarine	Cheese: Edam, Gouda, or Cheddar	Milk, whole, liter	Oil, cooking, liter	Tomatoes	Onions, yellow	Potatoes	Apples	Oranges, dozen	Bread, white, pkgd.	Rice	Sugar
	1.26	3.96	2.11	5.11	0.50	2.04	1.88	0.96	0.39	1.17	2.34	0.76	1.62	0.77
	.82	2.48	1.07	4.48	.29	1.06	.36	1.00	.54	1.37	.47	1.14	.54	.37
	1.24	4.67	1.98	5.50	.56	1.82	2.10	.56	.31	1.45	2.07	1.00	1.05	.99
	.74	3.05	2.56	3.97	.26	1.96	.45	.52	.25	.72	1.14	.72	.90	.62
	1.12	2.17	2.00	3.58	.46	1.84	1.15	.56	.37	.75	2.07	.94	.92	.45
	1.73	3.63	1.89	6.06	.54	2.48	3.02	1.33	.88	2.31	2.74	1.90	1.50	1.51
	1.16	2.22	1.69	2.88	.38	1.58	1.56	.49	.33	1.56	1.85	.67	.95	.50
	.45	3.06	1.41	6.55	.28	1.09	.65	.07	.30	1.53	.55	.53	.51	.26
	.86	2.65	2.46	4.38	.68	1.73	1.75	.69	.53	1.55	2.00	.77	1.32	.42
	1.39	4.26	1.57	4.15	.47	1.49	1.79	.79	.31	1.32	2.28	2.09	1.52	.63
	.69	1.91	1.66	2.29	.38	1.50	.83	.40	.32	.59	.53	.31	.98	.40
	1.44	4.24	1.74	4.35	.47	1.02	1.18	.59	.30	1.18	3.28	.81	1.21	.79
	1.71	3.24	2.38	5.44	.43	4.75	3.11	1.34	.82	1.67	2.12	1.91	1.40	.88
	.92	4.07	1.48	5.11	.47	1.44	.89	.45	.20	.63	4.16	.62	1.04	.77
	1.11	6.78	3.76	4.45	.97	2.51	1.52	.61	1.26	3.28	14.95	1.50	1.50	1.18
	.68	3.42	1.52	5.38	.56	2.31	1.52	.51	.64	1.74	2.28	1.17	1.01	.66
	1.12	3.36	1.82	4.47	.47	1.78	1.52	.58	.35	1.41	2.10	.88	1.05	.65

al Attachés.

Data Qualifications. Food price indexes, which reflect food price changes in general, are obtained from official government sources. They are based on local-currrency prices, and are not directly affected by exchange rate fluctuations.

Food prices of selected commodities are obtained by U.S. Agricultural Attachés on the first Wednesday of every other month. Local currency prices are converted to U.S. prices on the basis of exchange rates on the date of compilation. Thus, shifts in exchange rates directly affect comparisons between time periods.

The objective of the survey is to reflect the level of prices in other countries of items normally purchased by U.S. consumers. Exact comparisons are not always possible, since quality and availability vary greatly among countries. An attempt is made to maintain consistency in the items and outlets sampled, but they are not necessarily representative of those in the reporting countries. □

Feeding Trials Boost Mexican Use of U.S. Soybean Meal

On two *ejido* farms in the Mexican State of Puebla, hog feeding trials are winning converts to soybean meal, while introducing economic production techniques to small-scale producers.

Since Mexico must import about two-thirds of its yearly soybean and soybean meal requirements—and buys most of this from the United States—these changes are stimulating U.S. exports of soybeans and meal to Mexico. Last year, such exports earned $177 million to rank as the largest single U.S. agricultural export to that country.

"It's common for Mexican producers to have hogs on farms where they produce either corn or grain sorghum," said Dr. Don H. Bushman, animal nutritionist with the American Soybean Association (ASA)—FAS cooperator in foreign market development. "What they normally do, however, is sell the grain sorghum to the Government or the feed company and then turn around and buy commercial feed for their hogs, so they're losing money." The commercial feeds, he added, usually contain protein supplements such as safflower meal, sunflowerseed meal, cottonseed meal, and possibly fishmeal; byproducts like wheat bran and rice bran; and grain sorghum or corn.

To help improve profits—and also stimulate use of soybean meal—Bushman is showing Mexican farmers how to feed home grown grain along with soybean meal. Among his most recent projects have been hog feeding trials conducted in cooperation with Calixto Auguilar—a veterinarian with the Mexican Secretariat of Agriculture and Hydraulic Resources—on two small *ejido* farms in Puebla.

On these *ejidos* the land belongs to the Government but remains in a family's hands as long as the land is actually farmed. The problem is that such holdings are very small and become smaller still as they are handed down from generation to generation.

But because *ejidos* account for close to half of Mexico's total farmland, it is in the interest of the Mexican Government to encourage their adoption of efficient production practices. This need, in turn, has prompted the Government's cooperation with ASA in hog feeding trials such as those in Puebla.

Both *ejidos* in question are about the same size but differ markedly in production techniques.

One farm is typical of many small operations in Mexico, in that it revolves around a wide mix of products produced largely for home consumption and lacks the operating capital to make major improvements. The farmer works around 10 hectares in total. Two of these are in avocado trees—the main cash crop—interplanted with wheat; most of the remainder is largely in grain sorghum, which is retained for feeding. He also raises chickens, rabbits, and a few cows and horses in addition to hogs.

This farmer's hog herd includes 14 breeding sows, two boars, and several piglets—mainly crossbreeds of Hampshire, Duroc, and Yorkshire stock. The young pigs will be sold at the age of 6 months at weights of 100-110 kilograms for about 2,500 pesos each.

The farmer says he gets 1 kilogram of meat for every 3 of feed, using a mix of soybean meal, grain sorghum, and vitamins and minerals. The percentage of soybean meal starts at 24 percent for young pigs and falls to 19 percent and then 14 percent during the fattening process.

The other farm is more modern and efficiently operated, with promising future potential. "They have about five associates in the group, some operating capital, and capital for long-term investment," said Bushman.

This farm started out with 60 sows and three boars purchased from Government-affiliated Banco Rural, which also granted it a loan toward construction of the pens. However, the loan had to be paid off in 2 years, which necessitated selling off the original animals to raise money.

Since then, the herd has been built back up to almost 60 animals, and it is to be expanded to 80 in the near future.

The manager uses the pig manure, together with phosphate, as fertilizer on another holding where he grows corn forage for cattle feed. Unlike the first farmer, however, he buys most of the needed grain commercially, along with about 1 ton of soybean meal per month.

Prior to launching of the feeding trials some 12 months ago, ASA and the Mexican Secretariat of Ag-

Clockwise from top left: Bagged feed used by one of the farmers participating in the feeding trial; some of the feed used in the same trial; hogs queue for their rations of Mexican grain and U.S. soybean meal; and another of the smallholders grinds corn for feed.

riculture held a seminar to brief neighbors of the two farmers on their plans and hoped for results. When the trials finished in May, neighbors of the farmers were invited to a barbecue, where results were discussed. "The economic results definitely favored soybean meal," said Bushman.

ASA has provided the soybean meal, vitamins, and minerals for animals involved in the feeding trials. But both farmers have indicated that they will keep on using soybean meal. "At the larger farm, the operator probably buys 2-3 tons of soybean meal at a time; they previously used commercial feed but now have switched their entire operation—except for the control group—to soybean meal and grain," said Bushman.

Simultaneously with these demonstrations, ASA has been servicing large-scale hog producers in northern Mexico, such as one group that produces 13,000 market hogs per month. "There it's basically a matter of trying to provide up-to-date technical information in Spanish," said Bushman. "Getting the information to them in itself can be difficult. To illustrate the demand, after one announcement in our monthly publication over 40 percent of the 2,000 readers wrote for bulletins on poultry and pork production.

"We really cover the waterfront, depending upon what has to be done and where," Bushman continued. "We work with politicians from the standpoint that in most countries they control the imports. However, if we work with producers—and get enough interested—then the politicians will listen, and they listen more readily to their own people than to 'gringos'."

"If we can find a few dedicated men in positions either as producers or consultants, considerable change can be made in production systems and contacts established that will last for years," he concluded. □

Foreign Ownership of U.S. Farmland

How much of a problem is it?

Although there is no accurate information on the amount of U.S. farmland owned by foreigners, it is believed to be around 1 percent. In the following statement to the Subcommittee on Family Farms, Rural Development, and Special Studies of the House Agriculture Committee, Howard W. Hjort, Director of Economics, Policy Analysis, and Budget, USDA, said on June 20 that the situation does not warrant action to restrict such ownership . . . (but) requires more careful monitoring.

So far as we know, there are no accurate estimates of the quantity of U.S. land in foreign ownership or the number of foreign owners. In 1975, the Commerce Department, as part of its study of foreign direct investment in the United States, asked all 6,000 respondents in its survey to report on landholdings in excess of 200 acres. Total land owned, as reported in that survey, was 4.9 million acres. Using that number as a base, and adding liberally to account for foreign acquisitions since then,[1] we conclude that 1 percent of private land could be held by foreigners. Even if all of that were farmland (which it is not), it would be only slightly more than 1 percent of U.S. farmland.

We do not believe that the amount of farmland owned by foreign investors per se has had a significant impact on farmers or the agricultural economy at this time. Of greater concern are overall trends in land ownership in the United States, the impact of these trends on the structure of agriculture and the future viability of a family farm system, and the use and distribution of our land. Of particular importance are Government policy decisions, both within and outside agriculture, which impact these trends.

We have recently gone through a time in our history when farmland in the United States had more value as an investment asset than as a productive asset. Since 1970, average farmland value across the United States has more than doubled; in some areas of the Midwest it has tripled. Significantly, during the period of the time between 1972 and 1976, the capital gains possible on all U.S. farmland were estimated at $339 billion; the income earned off the production of that land was $144 billion, or less than half of that. According to our estimates, farmland value will climb another 6-8 percent during the year beginning February 1978.

[1] At current rates of acquisitions, and allowing for no dispositions, reported holdings of 1.2 million would be added to the total, yielding a current total of about 6.1 million acres. Double this amount would still be less than 1 percent of private land.

Perhaps with the exception of an oil well in Saudi Arabia, there have been few investment opportunities in the seventies both as lucrative and safe as U.S. farmland as a hedge against inflation. A chart comparing farm real estate with the General Price Index and with Common Stocks since 1965 shows that from that year to 1977 the farm real estate index more than tripled, the gross national product (GNP) deflator did not quite double, and the Standard and Poors 500 stock average was essentially unchanged. With the additional incentive of diversification of investments, the security of farmland investment, and the favorable price of U.S. farmland compared to farmland prices in Western Europe and Japan, there is little reason to wonder why the farm real estate market has been so attractive to investors.

The impact of investment by foreign entities, various kinds of trusts, corporations, and wealthy individuals on land prices and the structure of agriculture in this country is simply not statistically available at this time. In some part, this is due to the inadequacy of our data base and the lack of a nationwide system to keep track of land ownership. Furthermore, with only about 3 percent of the Nation's farmland changing hands in any 1 year, the impact of any trend is slow to show up in the statistics gathered.

It is reasonable to assume that if farmland remained as attractive an investment in the future as it has in the past few years, the number of investors would continue to increase. Therefore, we must separate our assessment of current impact from potential future impact in our responses.

Farm Real Estate Price Increases

Recent increases in farmland prices result from many factors, but most particularly from favorable crop prices during 1972-75 and farmers bidding against other farmers to expand their current farm sizes. USDA statistics show that in 1976, for example, 65 percent of the land transferred went to active farmers—the rest went to local nonfarmers, noncounty residents, or "others." In 1976, farm enlargement accounted for 63 percent of all farm tract purchases.

From purchases of farmland we have been able to identify since January 1, 1977, we estimate the annual value of farmland sold to foreign investors would amount to around $120 million. Even if we doubled that amount, foreign purchases would represent only about 1 percent of the annual value of sales of U.S. farmland.

In a competitive land market, with a large number of potential investors, the price will tend to be set by the value of land of the most highly efficient and largest farms. There are a number of kinds of purchasers who will have an advantage in this kind of market. Older farmers, who have large operations purchased years ago at relatively low land prices, can spread the cost of the new land over

their entire acreage and usually save on the cost of other agricultural inputs that can be used more efficiently on the large acreage. They can, therefore, afford to pay more for a given parcel of land than can a smaller farmer, whose per-acre costs are higher, or a younger farmer whose land was bought at higher prices. Thus, a rising land market tends to both increase land prices at the same time it tends to bid land away from smaller farmers to larger, more well established ones.

Impact on Farm Size

There are no statistics that adequately relate foreign investment with any specific size of farm. However, foreign investment in agricultural land is conducive to leasing to tenants, or engaging in farming directly by employing a full time manager, or by using a farm management company. The U.S. Census of Agriculture consistently shows both tenant-operated farms, and farms operated by owners who also rent a portion of their units, are larger in land area than farms entirely owned by the operator. The largest farms are those operated by managers. Furthermore, since the residual returns to land are the greatest on the larger farm, it is these farms that offer the greatest profit opportunities and would be the best natural candidates for investment.

As land values rise for whatever reason, the ad valorem real property tax will be increased if the tax rate remains the same. The cash flow problems caused by increasing taxes on appreciating assets are recognized. Reducing the tax rates will only further increase land values, thus enhancing the speculative or investment aspect of farming rather than the productive. This is indeed an important issue, but again one extending beyond foreign investment.

Separation of Capital, Labor, and Management

Perhaps the single most important structural change that may be occurring in the agricultural sector today is the increasing frequency of the separation of ownership from operation, in some part encouraged by the attractiveness of farmland investment. Traditionally family farmers have taken their profits in terms of making a living on the combined earnings of the land, their labor, and their management skill. However, as these functions are separated, rather than taking the combination of all three jointly producing a decent living, each will require its own competitive return. Managers will require a salary on a scale with industry. The new capital asset base will have to compete in tight and expensive capital markets, drawing capital away from other uses and paying whatever price the market imposes to meet that competitive need. Land will increasingly reflect its investment value, rather than its productive value, as it has in recent years.

To the extent that farmland is transferred out of the hands of farmers and into the hands of absentee landowners of any kind, there will be impacts on the community. Depending on the use of the holding, and its profitability, as well as the business decisions made by the owner, the net flow of income may be into or out of the community. If the land is owned by persons who do not contribute to community decisionmaking, public action, local service, and general community interest, then the effect may be negative. Again, I submit that this problem is no more or less severe if the absentee owner is located in Chicago, New York—or Tokyo, or Milan.

National Interest

The issues of foreign domination of food supplies can be treated directly. If a foreign country (aside from the investors of that country) wished to create harm to the United States or its citizens, the control of food supplies through ownership of one resource would be extremely inefficient and probably ineffective, if tried. Obviously, domination of commodities is far easier and direct than ownership of land. If foreigners do get land at bargain prices and export profits, there would be a long-run negative effect on the balance of payments. However, it is unlikely that special ability to seek out and purchase bargains would be among the advantages one might ascribe to foreign investors.

We have no way to statistically measure any impact foreign investment in farmland might have on commodity prices, balance of trade, or farm income of U.S. exports. Because of the limited extent of foreign investment in farmland, these impacts are probably negligible.

We do not feel that the situation of outside investor ownership of farmland has reached the kind of crisis proportions frequently portrayed in the media to warrant any action to restrict such ownership. We do feel, however, that the situation of land ownership in general, and its impact on the family farm structure, requires more careful monitoring than has taken place in the past.

There are a number of steps we are underwriting at the Department of Agriculture to both improve our data base on land ownership and control, and to look at the secondary impacts of land investment on the structure of American agriculture and family farmers.

We are currently seeking to improve our statistics on land ownership. The Resource Economic Survey of Land

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Ownership is now underway and results of that survey will be available late this year and early in 1979. The survey is a sample of 50,000 pieces of non-Federal land and was designed to provide State-level estimates of the principal owner characteristics. It includes questions on the residence and citizenship of the owner. The survey data will permit us to determine who owns the land; the type of owner (individuals, corporations, trusts, etc.); the characteristics of owners, such as occupation, income, age; the total quantity of land held and its use; and the land improvements, management, acquisitions, and dispositions. The survey will provide a data base from which analyses can determine how owners affect the way land is used, how ownership of land affects the distribution of program benefits and costs, and how wealth is distributed among segments of our population.

Although the national land ownership survey may supply some information on foreign holders, it was intended for the larger picture of landownership. Because the number of foreign owners is small and the quantity of land owned by them is small, the sample survey cannot provide all the desired detail on foreign ownership. Furthermore, the use of nominees, trusts, partners, corporations, and other devices to mask the identity of owners may obscure the actual ownership patterns.

More Facts Needed

As the International Investment Survey Act of 1976 (IISA) recognized, and the recent GAO report confirmed, the lack of adequate facts is a problem in analyzing the foreign ownership issue. Under Section 4(d) of the IISA, the President was directed to: . . . conduct a study of the feasibility of establishing a system to monitor foreign direct investment in agricultural, rural, and urban real property, including the feasibility of establishing a nationwide multipurpose land data system . . .

The responsibility for the 4(d) study has been delegated to the Department of Agriculture and, pending approval of Congress for supplemental appropriation, the Department has begun the preliminary stages of an investigation of several methods of monitoring foreign ownership of U.S. real estate, urban and rural. This study is scheduled for completion in late 1979. It will examine such problems as the means by which ownership identity can be cloaked; the usefulness of public title and tax records in providing aggregative data; the adequacy, timeliness, and accuracy of various public and private sources of information; and comparable methods of reporting in other countries. □

USDA Official Says: Aggressive Foreign Marketing Needed

USDA General Sales Manager, Dr. Kelly Harrison, called for more aggressive market development for U.S. farm exports at the annual meeting of U.S. market development cooperators in Washington, D.C., July 13.

Dr. Harrison said:

"I am convinced that the next major breakthrough in export promotion will hinge on closer cooperation in strategic market planning and market development activities. The collective export marketing challenge of farmers, cooperatives, processors, exporters, and Government employees is no different from that facing any modern business.

"We must convince foreign buyers that U.S. products are just what they need and want. And if we find that is not the case, we must see that the products and services are modified to meet the customers' perceived needs.

"We have just four interrelated variables to manipulate in collectively satisfying foreign customers:

- The physical characteristics, quality, and packaging of the product itself;
- The price or net buyer cost of the product;
- The efficient and timely delivery of the product;
- A mix of promotional services such as technical and managerial assistance, customer servicing, advertising, and public relations.

"I believe it is now time to expand and coordinate our collective marketing efforts to fully encompass all four of those variables through strategic marketing planning and implementation.

"By paying attention to the appropriate product (including quality), price (including credit), delivery (including transportation methods), and the promotional mix in each foreign country, we can significantly increase U.S. exports to the benefit of farmers, agri-businessmen, and the economy." □